

## Abstract

A method of sizing paper by applying a composition comprising an aqueous dispersion of polymeric particles of particle size up to 1 micron, preferably 80-200nm, wherein the polymeric particles comprise a water insoluble polymer matrix, preferably formed from styrene and 2-ethylhexyl acrylate, characterised in that an oligomer formed from a monomer blend comprising,

- (a) (meth)acrylamide, and  
(b) organic mercaptan or an organic sulphone, preferably dodecyl mercaptan or dodecyl sulphone

is located at the surface of the particles. Compositions where the oligomer further comprises an ethylenically unsaturated monomer comprising either a tertiary amine group or a quaternary ammonium group, preferably dimethylaminoethylmethacrylate are novel.

Advantages of the composition when applied to the surface of paper, include improved water resistance, brightness and printability properties of the treated paper.